

The listing of claims replaces all prior versions and listings of claims in this application.

Listing of Claims:

1-32. (canceled)

33. (currently amended) An analyzer comprising:

a sample preparing portion configured for preparing an assay sample comprising a reagent and a whole blood specimen, the sample preparing portion comprising:

a reaction vessel and a reagent supplying portion for supplying the reagent to the reaction vessel, wherein the reagent comprises fluorescent carrier particles sensitized with an antibody or an antigen against a target substance found in the serum or blood plasma portion of the whole blood specimen;

a flow cell;

an assay sample supplier for supplying the assay sample from the reaction vessel to the flow cell;

a light source for irradiating the assay sample in the flow cell;

a first detector for detecting fluorescence intensities from irradiated blood cells and irradiated fluorescent carrier particles in the assay sample;

a second detector for detecting scattered light intensities from irradiated blood cells and irradiated fluorescent carrier particles in the assay sample; and

an analyzing portion device configured for performing operations comprising:

differentiating the blood cells and the fluorescent carrier particles based on the detected fluorescence intensities received from the first detector and the detected scattered light intensities received from the second detector;

counting the differentiated blood cells; and

detecting agglutination degree of the differentiated fluorescent carrier particles based on the detected scattered light intensities by processing the output of the second detector.

34. (previously presented) The blood analyzer of claim 33, further comprising a second reagent supplying portion for supplying the reagent to the reaction vessel,

wherein the assay sample further comprises a second reagent comprising a fluorescent dye for staining blood cells.

35. (previously presented) The blood analyzer of claim 34 wherein the analyzing portion differentiates blood cells into erythrocytes, leukocytes, and platelets, and wherein the analyzing portion counts the differentiated blood cells.

36. (previously presented) The blood analyzer of claim 33, wherein the operations further comprise:

- obtaining a concentration value of the target substance based on the detected agglutination degree; and

- correcting the concentration value as a whole blood immunoassay result to a concentration value as a serum or plasma immunoassay result based on a result of blood cell counting.

37. (previously presented) The blood analyzer of claim 33, wherein the operations further comprise: obtaining a concentration value of the target substance based on the detected agglutination degree;

- obtaining a hematocrit value based on size information of blood cells; and

- correcting the concentration value as a whole blood immunoassay result to a concentration value as a serum or plasma immunoassay result based on the hematocrit value.

38. (currently amended) An analyzer comprising:

- a sample preparing portion configured for preparing an immunoassay sample for an immunoassay by adding a first reagent for the immunoassay to a first specimen split from a whole blood specimen, and for preparing a counting sample for blood cell counting by adding a second reagent for the blood cell counting to a second specimen split from the whole blood specimen;

wherein the first reagent comprises fluorescent carrier particles sensitized with an antibody or an antigen against a target substance found in the serum or blood plasma portion of the whole blood specimen;

wherein the second reagent comprises a fluorescent dye for staining blood cells; and

wherein the sample preparing portion comprises a first reaction vessel for preparing the immunoassay sample, a second reaction vessel for preparing the counting sample, a first reagent supplying portion for supplying the first reagent to the first reaction vessel, and a second reagent supplying portion for supplying the second reagent to the second reaction vessel;

a flow cell;

an immunoassay sample supplier for supplying the immunoassay sample from the first reaction vessel to the flow cell;

a counting sample supplier for supplying the counting sample from the second reaction vessel to the flow cell;

a light source for irradiating the immunoassay sample or the counting sample in the flow cell;

a first detector for detecting fluorescence intensities from irradiated particle components contained in each of the immunoassay sample and the counting sample;

a second detector for detecting scattered light intensities from irradiated particle components contained in each of the immunoassay sample and the counting sample;
and

an analyzing portion device configured for performing operations comprising:

differentiating the fluorescent carrier particles from the blood cells based on the detected fluorescence intensities of the immunoassay sample by the first detector and the detected scattered light intensities transmitted by the second detector;

detecting agglutination degree of the differentiated fluorescent carrier particles based on the detected scattered light intensities of the immunoassay sample transmitted by the second detector;

differentiating the blood cells based on the detected fluorescence intensities of the counting sample transmitted by the first detector and the detected scattered light intensities of the counting sample transmitted by the second detector; and

counting the differentiated blood cells.

39. (previously presented) The blood analyzer of claim 38, wherein the analyzing portion differentiates blood cells into erythrocytes, leukocytes, and platelets, and wherein the analyzing portion counts the differentiated blood cells.

40. (previously presented) The blood analyzer of claim 38, wherein the operations further comprise:

obtaining a concentration value of the target substance based on the detected agglutination degree; and

correcting the concentration value as a whole blood immunoassay result to a concentration value as a serum or plasma immunoassay result based on a result of blood cell counting.

41. (previously presented) The blood analyzer of claim 38, wherein the operations further comprise:

obtaining a concentration value of the target substance based on the detected agglutination degree;

obtaining a hematocrit value based on size information of blood cells; and

correcting the concentration value as the whole blood immunoassay result to a concentration value as a serum or plasma immunoassay result based on the hematocrit value.

42. (new) An analyzer comprising:

a sample preparing portion configured for preparing an assay sample comprising a reagent and a whole blood specimen, the sample preparing portion comprising:

a reaction vessel and a reagent supplying portion for supplying the reagent to the reaction vessel, wherein the reagent comprises fluorescent carrier particles sensitized with an antibody or an antigen against a target substance found in the serum or blood plasma portion of the whole blood specimen;

a flow cell;

an assay sample supplier for supplying the assay sample from the reaction vessel to the flow cell;

a light source for irradiating the assay sample in the flow cell;

a first detector for detecting fluorescence intensities from irradiated blood cells and irradiated fluorescent carrier particles in the assay sample through a first device that converts a first non-electrical energy into first electrical energy;

a second detector for detecting scattered light intensities from irradiated blood cells and irradiated fluorescent carrier particles in the assay sample through a second device that converts a second non-electrical energy into second electrical energy; and

an analyzing system comprising:

- a differentiating processor that distinguishes blood cells and the fluorescent carrier particles by processing output transmitted by the first detector and the second detector;
- a measuring detector that counts the differentiated blood cells; and
- an agglutination processor in communication with the second detector that translates the fluorescent carrier particles into a rate of agglutination based on the received output of the second detector.

43. (new) The analyzer of claim 42 where the agglutination detector comprises means for detecting agglutination degree of the fluorescent carrier particles based on the detected scattered light intensities captured in the output of the second detector.

44. (new) The analyzer of claim 42 further comprising a visual output device in communication with the agglutination processor to display physical agglutination patterns.